EME 6403 Quality Control (Online) – CRN 5131 – Summer 2008

| COURSE TITLE | EME 6403 Quality Control  
Spring semester 2008 – [http://my.ltu.edu](http://my.ltu.edu) and select CRN 5131 |
|--------------|-------------------------------------------------------------------------------------|
| INSTRUCTOR   | John Shevlin  
Adjunct Professor, College of Management  
jshevlinltu@fuse.net  
Home Phone 513-774-0453  
Cell Phone: 734-673-3473  
(Please no calls after 10:00pm)  
Office hours by appointment |
| SCHEDULE     | On-line modules and exam period (College of Engineering schedule):  
May 14th – July 24th  
See [http://www.ltu.edu/registrar/index.asp](http://www.ltu.edu/registrar/index.asp) for LTU academic calendar information. |
| LEVEL / HOURS PREREQUISITE | Masters Degree / 3 semester credit hours |
| REQUIRED TEXT | Sower, Victor. Essentials of Quality with Cases and Experiential Exercises.  
2006.  
Note: This book is currently in manuscript form and will be posted chapter by chapter on Blackboard. |
| ADDENDA      | LTU Online student resources [http://www.ltu.edu/ltuonline/index.asp](http://www.ltu.edu/ltuonline/index.asp)  
Course-specific information is provided in the “Course Information” area |
| TECHNICAL SUPPORT | Technical support for using Blackboard is provided by the LTU Help Desk,  
248-204-2330 or [vitrc@ltu.edu](mailto:vitrc@ltu.edu) |
Educational Goals

Quality Control is a study of current topics in quality control techniques to include total quality management, statistical quality control, statistical process control, quality circles, and Deming's methods. Emphasis will be placed on the systems approach to quality control.

Objectives

The course is designed to cover the managerial and technical elements of Quality Control. Therefore, the main objectives of this course are to provide an understanding of the current ideas of "Quality" from a management perspective and also to develop an understanding and apply tools of quality management and control. These objectives will be evaluated via assignments, quizzes, examinations, and other methods throughout the course.

Prerequisite Skills

PowerPoint, Word, Excel (Potentially), Understand and interpret graphs.

Instructional Methods and Course Organization

A variety of instructional methodologies are used in this course. List the specific methods used in your course, which may include but are not limited to:

- Blackboard learning environment – Blackboard at my.ltu.edu contains the syllabus, all assignments, reading materials, streaming videos, narrated Powerpoint mini-lectures, podcasts, written lecture notes, chapter quizzes, links to Web resources, and discussion forums. You will submit all assignments via Blackboard, and are expected to participate regularly in discussion topics. Please take time to familiarize yourself with the organization of the Blackboard site. You will want to check the site frequently for announcements reminding you of new resources and upcoming assignments.
- Student/Instructor Conversations – Students keep in touch with the instructor via e-mail messages, telephone conference calls, and IM conversations.
- Self-assessments – Pre- and post- self-assessment tools will help students measure their entering skills and progress during the course.
- Required readings – Textbook chapters should be read according to the schedule outlined in the syllabus. Chapters will be discussed online.

Class Policies and Expectations

I plan to offer you a valuable learning experience, and expect us to work together to achieve this goal. Here are some general expectations regarding this course:

Each student has a LTU e-mail account. If you wish to use a different e-mail address for this course, please change your e-mail address in Blackboard under “Student Tools” and send an e-mail to mailto:jshevinltu@fuse.net so I can store your address in my e-mail directory.

Readings, discussion forum participation, and written assignments must be completed according to the class schedule. If business travel will take you away from regular participation, please clear these dates with me in advance.
It is essential that all students actively contribute to the course objectives through their experiences and working knowledge of business and quality.

All assignments must be submitted on schedule, via Blackboard, and using Microsoft Office-compatible software. If you need to submit an assignment via e-mail, contact the instructor in advance. Late work will be reduced in value.

Assignments must be completed to an adequate standard to obtain a passing grade. Requirements for each assignment are detailed in this syllabus and on the LTU Online web site. Be prepared to log into Blackboard at least once each day. Please focus your on-line correspondence within the appropriate Blackboard discussion forums so that your colleagues can learn from you.

At the end of the course, you will be invited to participate in a University evaluation of this course. Your feedback is important to the University, to LTU Online, and to me as an instructor, and I encourage you to participate in the evaluation process.

It is important for you as students to know what to expect from me as your instructor:

- I will be available to you via e-mail and phone, and will promptly reply to your messages.
- I will be available to you for face-to-face appointments as requested.
- I will maintain the Blackboard web site with current materials, and will resolve any content-related problems promptly as they are reported to me.
- I will send out a weekly e-mail update to all class members to guide upcoming work and remind you of assignment due dates.
- I will return all assignments to you promptly, and will include individualized comments and suggestions with each assignment.
- I will hold our personal written or verbal communications in confidence. I will not post any of your assignments for viewing by the class without requesting your approval in advance.
- I will treat all members of the class fairly, and will do my best to accommodate individual learning styles and special needs.
- I expect you to inform me of any scheduling conflicts that arise that will impact your ability to maintain the course schedule.
- I expect you to work in groups effectively and treat your group members with a high degree of respect and understanding.
- I travel frequently for work and therefore I will post my schedule as it develops during the semester. This is for your awareness as to my availability and potential choice of communication (phone call versus e-mail) for the time zone I will be in.

If any of these points need clarification, or when special circumstances arise that require my assistance, please contact me so that we can discuss the matter personally.
## Course Schedule

This fully online course begins with a one-week online course orientation period to familiarize yourself with the online learning environment and to meet online or via phone with your instructor. Each week starts on a Monday and ends on a Sunday. Assignments are due no later than midnight on the Sunday the module closes. Late assignments will be downgraded accordingly.

<table>
<thead>
<tr>
<th>Dates</th>
<th>Modules</th>
<th>Topics / Readings</th>
<th>Assignments Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to Start of Semester and Week of May 14 - 18</td>
<td>Module 0</td>
<td>Overview of textbook Online Learning Orientation Course Orientation and group formation Opt On-Line Classroom: TBA</td>
<td>Course orientation Instructor conversation Propose Teams Introduction to Blackboard (Bb)</td>
</tr>
<tr>
<td>Week of May 19 – May 25</td>
<td>Module 1</td>
<td>Chapter 1 – Definition of Quality, Quality Mgt. Philosophies Chapter 2 - Operationalizing the Dimensions of Quality (Note: A Chapter may extend over the course of several modules. Several chapters may also be introduced in a single module.)</td>
<td>Bb Forums Case Study (2.1 Second National Bank – Due no later than midnight May 25. Follow assignment details outlined in the syllabus.)</td>
</tr>
<tr>
<td>Week of May 26 – Jun 1</td>
<td>Module 2</td>
<td>Chapter 3 – The Seven Management Tools and QFD, Reliability Engineering</td>
<td>Bb Forums Lea Summary (Potentially)</td>
</tr>
<tr>
<td>Week of Jun 2 – Jun 8</td>
<td>Module 3</td>
<td>Chapter 4 – Quality Management Principles Chapter 5 – Quality Systems and Auditing</td>
<td>Bb Forums</td>
</tr>
<tr>
<td>Week of Jun 9 – Jun 15</td>
<td>Module 4</td>
<td>Chapter 6 – Product, Process, &amp; Material Control</td>
<td>Bb Forums</td>
</tr>
<tr>
<td>Week of Jun 16 – Jun 22</td>
<td>Module 5</td>
<td>Chapter 7 – Design of Experiments</td>
<td>Bb Forums Lea Summary (Potentially)</td>
</tr>
<tr>
<td>Week of Jun 23 – Jun 29</td>
<td>Module 6</td>
<td>Chapter 8 – The Problem Solving Process and Seven Tools of Quality</td>
<td>Bb Forums</td>
</tr>
<tr>
<td>Week of Jun 30 – Jul 6</td>
<td>Module 7</td>
<td>Chapter 10 – Statistical Process Control, Variables Control Charts and Attribute Control Charts, Process Capability</td>
<td>Bb Forums Lea Summary (Potentially) Case Study (10.2 Precise Molded Products – Due no later than midnight Jul 6. The case study references &quot;dimensions&quot; that are not required to complete this case study.)</td>
</tr>
<tr>
<td>Week of Jul 7 – Jul 13</td>
<td>Module 8</td>
<td>Chapter 11 - Acceptance Sampling Chapter 12 - Quality Costs Chapter 13 - Human Factors</td>
<td>Term Paper (Due no later than midnight Jul 13)</td>
</tr>
<tr>
<td>Week of Jul 14 – Jul 20</td>
<td>Final Exam</td>
<td>Final Exam (Multiple Choice, True/False)</td>
<td>Due no later than midnight Jul 20</td>
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End of Summer Semester
Student Evaluation

The course has five assignments totaling 100 points (left column). Letter grades are awarded based on the total number of points achieved (right column). Points are deducted for late assignments.

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Points</th>
<th>Class Points</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Lean Summaries (2 @ 5 points each)</td>
<td>10</td>
<td>96 and above</td>
<td>A</td>
</tr>
<tr>
<td>Individual Term Paper</td>
<td>25</td>
<td>90 – 95</td>
<td>A-</td>
</tr>
<tr>
<td>Individual Case Studies (2 @ 7.5 points each)</td>
<td>15</td>
<td>87 – 89</td>
<td>B+</td>
</tr>
<tr>
<td>Online Participation</td>
<td>10</td>
<td>83 – 86</td>
<td>B</td>
</tr>
<tr>
<td>Final Exam</td>
<td>40</td>
<td>80 – 82</td>
<td>B-</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>77 – 79</td>
<td>C+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>73 – 76</td>
<td>C</td>
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<td>70 – 72</td>
<td>C-</td>
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<td></td>
<td>61 – 69</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60 and below</td>
<td>E</td>
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Note: Grades lower than “B” fall below the LTU graduate standard.
Practical Guidelines for Class Load Expectations

A three-credit graduate course generally requires at least nine hours per week of time commitment. Here are some practical guidelines to help schedule your time commitments for this online course:

A 14-week semester (the Summer “E” semester is compressed into 11 weeks) would require at least 126 hours of time commitment to successfully complete all readings, activities, assignments, and texts as described in this syllabus.

You should reserve at least 6 hours per week to read the required textbook chapters and resources, participate in online discussions, review presentation materials, and work through online quizzes. This effort will total at least 84 hours over the course of the semester.

You should organize your remaining time to roughly correspond with the point value of each major assignment. This means that you should plan to spend at least:

- 8-9 hours preparing your case study review;
- 2-4 hours working with your group (if necessary)
- 8-9 hours working on the various components of your reflective consolidation (final exam).

These guidelines may not reflect the actual amount of outside time that you – as a unique individual with your own learning style – will need to complete the course requirements. The number of hours each week will vary based on assignment due dates, so please plan ahead to insure that you schedule your academic, work, and personal time effectively. The following graphic can be used to guide you in planning your weekly course work to remain on schedule:

**On-Line Learning Schedule**

<table>
<thead>
<tr>
<th>Sun</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read Textbook Chapter</td>
<td></td>
<td></td>
<td>Take On-Line Chapter Quiz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual and Group Project Work – Coordinate With Colleagues</td>
<td></td>
<td></td>
<td></td>
<td>Instructor Communication – As Needed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Assignment Details

Course assignments and evaluation criteria are detailed below. Please review these requirements carefully. See the section Academic Resources / Assessment Guidelines for information about assessment of written and oral presentations.

Details for all assignments are shown below. Please note that you should submit any assignments to the Blackboard “Digital Drop Box.” Some assignments are also posted to the Blackboard Discussion Forum for student comments.

**Individual Assignment Lean Summaries (10 Points – 5 points each)**

One page “lean” summary for 2 of the topics of your groups choosing found below:
- Seven Management Tools and QFD
- Design of Experiments (DOE)
- Statistical Process Control, Control Charts or Process Capability (Pick one of the topics)
- Process Capability

Individual summaries are due at the conclusion of the appropriate chapter. The idea of a Lean Summary is a 1-page visual document that can be used as a “memory jogger” at the completion of this course. See my example on Black Board of a “Lean Summary” of this course. Other student examples will also be posted.

**Individual Assignment Case Studies (15 Points – 7.5 points each)**

Individual analysis of each case study should include such items as:
- Major problem faced by the organization
- Alternatives and evaluation
- Your recommendations & rationale
- Implementation: How? When?
- Answers to any specific questions provided, if any

**Individual Term Paper (25 points)**

Each individual is responsible to write a term paper (**no more than 10 pages in length**, double spaced, APA citation formatting) on a topic such as “Quality Control Techniques, Application of Quality Engineering or Quality Management System.” The main focus of the paper being from the textbook and must be agreed upon by the individual and instructor. You must refer to at least five credible sources and specify them on the list of your references; **Internet sources are only acceptable if they are credible. If you have questions, please ask.**

Your critique and application (up to 22 points)
- Use of either a “lessons learned” or “best practices” approach – 14 points
- Overall critical thinking and writing quality – 8 points
- Your citations (up to 3 points)
- Use of at least five citations from trade or academic journals – 2 points
- Use of APA citation formatting – 1 point
Individual Online Participation (10 points)

Students often bring valuable experience, and learning through lively online discussions is encouraged. Discussion will be conducted through the Blackboard system in the "Discussion Board" area of the module. Written responses are expected to be of high quality, challenge each other’s thoughts and build upon or offer a differing viewpoint. A simple “Yes, No, I agree, etc.” is considered to be non-value added and unacceptable.

Up to 10 points – Actively participating in Blackboard discussion forums, responding to questions posted by the instructor, and interacting positively with other students.

Syllabus Addenda

Please see the LTU Online “Current Students” web site [http://www.ltu.edu/ltuonline/currentonline.asp](http://www.ltu.edu/ltuonline/currentonline.asp) for comprehensive information about Lawrence Tech’s academic services, library services, student services, and academic integrity standards. The contents of this web site is explicitly included as syllabus requirements.

The LTU Online “Current Students” web site also includes grading rubrics used by your instructor to evaluate written assignments, discussion forum participation, and group assignments. Please note that the SafeAssignment anti-plagiarism product will be used for written assignments submitted for this course. Please see the instructions included on the LTU Online web site regarding the use of the SafeAssignment product.